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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/481,784	01/11/2000	Matti Floman	460-009131-US(PAR)	6099

7590

07/18/2003

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EXAMINER

ANDERSON, MATTHEW D

ART UNIT

PAPER NUMBER

2186

DATE MAILED: 07/18/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/481,784

Applicant(s)

FLOMAN ET AL.

Examiner

Matthew D. Anderson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,5. 6) ☐ Other:

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed 1/11/00 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the publication dates of the documents are not listed on the IDS. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).
3. 37 CFR 1.98(b) requires that each U.S. patent listed in an information disclosure statement be identified by patentee, patent number, and issue date. Each foreign patent or published foreign patent application must be identified by the country or patent office which issued the patent or published the application, an appropriate document number, and the publication date indicated on the patent or published application. Each publication must be identified by author (if any), title, relevant pages of the publication, date and place of publication. The date of publication supplied must include at least the month and year of

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publication, except that the year of publication (without the month) will be accepted if the applicant points out in the information disclosure statement that the year of publication is sufficiently earlier than the effective U.S. filing date and any foreign priority date so that the particular month of publication is not in issue. The place of publication refers to the name of the journal, magazine, or other publication in which the information being submitted was published.

Specification

4. The abstract of the disclosure is objected to because "Fig. 1" in line 23 should be deleted. Correction is required. See MPEP § 608.01(b).
5. The disclosure is objected to because of the following informalities: section headings should be added within the specification as set forth by MPEP 608.01(a). Appropriate correction is required.

Response to Amendment

6. In response to the amendment filed 1/11/00, claim 7 has been amended.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

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8. Claims 1-2 and 4-5 are rejected under 35 U.S.C. 102(e) as being anticipated by Ishii *et al.* (US Patent # 5,923,829).

9. With respect to claims 1-2 and 4-5, Ishii *et al.* disclose:

refreshing memory cells in a synchronous dynamic memory, wherein the information stored in the memory cells at a given time is divided into information to be maintained and information not requiring maintenance, wherein the memory cells not requiring maintenance remain unrefreshed, wherein the dynamic memory is divided into two or more blocks which can be refreshed independently, by teaching in column 9, line 60 through column 10, lines 6, a case in which only the bank 0 of the SDRAM enters the power-down mode. The bank 0 of the SDRAM stores data which should be maintained. For maintaining the stored data, a self-refreshing operation is automatically performed on the bank 0 of the SDRAM. Therefore, the refresh request which is given externally is invalidated. Power required for a refreshing operation through the self-refreshing operation is extremely small in comparison to power required for the refreshing operation through the external refresh request. In contrast to this, bank 1 of the SDRAM, which is not storing data to be maintained, a refreshing operation is not performed in order to reduce power consumption;

information on the location of each application program to be executed is stored as well as on the quantity of memory allocation by each application, and it is determined on the basis of said stored information which of the memory block contain information requiring maintenance, wherein other memory blocks remain unrefreshed, by teaching in column 11, lines 50-67, FIGS. 10 and 11 show examples of timing charts of such a refreshing operation. The refresh control unit 21 previously has information indicating a position at which image information is

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stored and a time at which the image information is stored at the position. Based on the information, the refresh control unit 21 causes a REFREQ signal to be at a low level for requesting the refreshing operation at a '0'th clock pulse of a clock signal CLK as shown in FIGS. 10 and 11. The adjusting control unit 22 recognizes this level change of the REFREQ signal. The adjusting control unit 22 regularly monitors a state of the SDRAM via the SDRAM control unit 24. Therefore, the adjusting control unit 22 confirms that the SDRAM is in a state in which the SDRAM can accept a request for the refreshing operation after recognizing the level change of the REFREQ signal indicating requesting of the refreshing operation. Further, the adjusting control unit 22 also confirms that there is no other higher-priority request. After the confirmation has been achieved, the adjusting control unit 22 causes a REFAK signal to be at a low level for permitting the request for the refreshing operation at a '1'st clock pulse of the clock signal CLK as shown in FIGS. 10 and 11.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. and Stolt et al. (US Patent # 5,721,860).

12. With respect to claims 3 and 6, Ishii et al. teach all other limitations of the parent claims, but fail to specifically disclose the dynamic memory comprising an asynchronous dynamic

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memory. Stolt *et al.* disclose in column 10, line 28, an asynchronous DRAM (ADRAM) refresh operation.

13. It would have been obvious to one of ordinary skill in the art, having the teachings of Ishii *et al.* and Stolt *et al.* before him at the time the invention was made, to modify the DRAM refresh taught by Ishii *et al.*, to be an asynchronous DRAM as in the DRAM refresh of Stolt *et al.*, to minimize overhead since addresses do not need to be generated, as taught by Stolt *et al.*.

14. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii *et al.* and Baweja *et al.* (US Patent # 6,212,599).

15. With respect to claims 3 and 6, Ishii *et al.* teach all other limitations of the parent claims, but fail to specifically disclose the electronic device to be a communication device comprising mobile station functions. Baweja *et al.* disclose in figure 1, a refreshing system containing a mobile system controller.

16. It would have been obvious to one of ordinary skill in the art, having the teachings of Ishii *et al.* and Baweja *et al.* before him at the time the invention was made, to modify the DRAM refresh taught by Ishii *et al.*, to include a mobile system controller, as in the DRAM refresh of Baweja *et al.*, in order to provide a mobile computer system and coupling to a peripheral bus and accompanying PCI components, as taught by Baweja *et al.*.

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Conclusion

17. The prior art made of record on form PTO-892 and not relied upon is considered pertinent to applicant's disclosure. Applicant is required under 37 C.F.R. § 1.111(c) to consider these references fully when responding to this action. The documents cited therein teach similar DRAM refresh systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Anderson whose telephone number is (703) 306-5931. The examiner can normally be reached on Monday-Friday, 2nd Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim can be reached on (703) 305-3821. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.



Matthew D. Anderson

July 14, 2003